

REMARKS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Claims 1, 3, 5-11, 13 and 15-22 are now present in this application. Claims 1, 7, 11, 15, and 19 are independent.

Claims 4 and 14 have been canceled; and claims 1, 6, 7, 11, 15 and 19 have been amended. Reconsideration of this application, as amended, is respectfully requested.

Priority Under 35 U.S.C. § 119

Applicant thanks the Examiner for acknowledging in the March 23, 2007 Office Action, Applicant's claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Information Disclosure Citation

Applicant thanks the Examiner for considering the references supplied with the Information Disclosure Statements filed July 21, 2003, November 20, 2003, January 19, 2005, February 9, 2005, and September 14, 2005, and for providing Applicants with initialed copies of the PTO-1449 or PTO-SB08 forms filed therewith.

Drawings

Applicant thanks the Examiner for indicating that the drawings filed on July 21, 2007 and June 11, 2007 are accepted.

Claim Objections

The Examiner has objected to claims 7 and 15 because of several informalities. In order to overcome this objection, Applicant has amended claims 7 and 15 in order to correct the deficiencies pointed out by the Examiner. Reconsideration and withdrawal of this objection are respectfully requested.

Claim Amendments

Applicant has amended claim 6 in order to place the claim in better form. The claim amendments are not being made in response to any statutory requirement for patentability, and the claim has not been narrowed in scope. Instead, the claim has been amended merely to recite the subject matter therein more clearly.

Rejections under 35 U.S.C. §103

Claims 1, 3, 5, 11, and 13-14

The Office action rejects claims 1, 3-5, 11, and 13-14 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0019364 to Kawahara (hereinafter "Kawahara" in view of U.S. Patent No. 5,438,367 issued to Yamamoto et al (hereinafter "Yamamoto").

Independent claims 1 and 11 have been amended to include the features of claims 4 and 14 respectively. As amended, the claims include the following feature:

said exposure detecting unit detects said exposure level with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit, and immediately thereafter said exposure detecting unit detects said exposure level with said light source not emitting light.

The Office Action asserts that this feature is disclosed in both Kawahara and Yamamoto. Applicant respectfully disagrees. In contrast to the above-noted feature, Kawahara Figure 13A indicates that an image is captured, segmented and detected without light emitted from the flash unit (Kawahara, S373-S376), then captured, segmented and detected with light emitted from the flash unit (Kawahara, S377-380). (See also Kawahara, paragraphs 150-151). The sequence of non-emission and emission is opposite that of the feature recited in amended claims 1 and 11. Figure 13B merely indicates that after some processing of data from the first two captures, light is emitted from the flash *again*.

Yamamoto discloses a process for correcting an amount of light-emission that involves iteratively moving the photographed subject through four positions (L1-L4) and measuring the amount of light captured at each. The process discloses light emission for each iteration. (See

column 11, generally). Therefore, the process is wholly unlike the above-noted feature of amended claims 1 and 11. These claims are therefore believed to be in condition for allowance for at least the reasons given above. Reconsideration is respectfully requested.

Claims 3,5, and 13 depend from claim 1 or 11 and are therefore believed to be allowable for at least the reasons discussed above.

Claims 6, 8, 10, 16, and 18

Claims 6, 8, 10, 16, and 18 are rejected under § 103(a) as unpatentable over Kawahara and Yamamoto in further view of U.S. Patent No. 6,654,062 issued to Numata et al (hereinafter "Numata").

Applicant respectfully submits that claims 6, 8, 10, 16, and 18 are in condition for allowance for at least the reasons given for claims 1 and 11, from which they depend. Claims 6, 8 and 16 are believed to be allowable for additional reasons set forth below.

Claim 6 recites, in part, "wherein a shutter key operation status is determined, the status determination triggered when said exposure level detected by said exposure detecting unit matches said optimal level." Neither Kawahara, Yamamoto, nor Numata discloses such a feature.

The Office Action asserts that Numata discloses "use of a shutter key button of an electronic camera to trigger a detection of exposure level for determining a proper exposure value and to instruct storage of image to a storing unit." (Office Action pp 10-11). However, this alleged feature does not teach that determination of a shutter key operation status is triggered when a detected exposure level matches an optimal level. The determination in claim 6 of whether the detected exposure level matches an optimal level happens *before* the determination of the shutter key's operation status. Accordingly, Applicant respectfully submits that claim 6 is in condition for allowance.

Claims 8 and 16 recite, in part, a "start level determining unit for determining whether said exposure level detected by said exposure level detecting unit in said non-emission state set

by said starting state setting unit matches said optimal level or not." (Emphasis added). In contrast, Numata discloses that a brightness level in a non-emission state is measured by a light measuring device for determining whether or not the brightness level is smaller than a minimum brightness value required for capturing an image without emission of light from the flash unit. Determining whether a value is smaller than a minimum value is not, without more information, the same as determining whether a value matches an optimal value. The Numata minimum value is "the minimum brightness with which camera can take a picture at a predetermined shutter speed without flash." (Column 6, lines 1-4). In the present invention, the optimal exposure value is one that does not result in over-exposure or under-exposure. (See specification generally). The "minimum value" defined in Numata does not take under- or over-exposure into account. I.e., image data may be greater than minimum value and still be under-exposed or over-exposed. Accordingly, Applicant respectfully submits that claim 8 is allowable for at least the above reasons in addition to being dependent upon claim 1.

Claims 7 and 15

Claims 7 and 15 are rejected under § 103(a) as unpatentable over Kawahara and Yamamoto in further view of U.S. Patent No. 7, 092,029 issued to Medwick et al (hereinafter "Medwick"). Applicant respectfully submits that the cited references do not alone or in combination disclose every feature of claim 7 or 15.

In particular, claims 7 and 15 recite, in part, "a table having a plurality of reference light emission quantities and a plurality of reference differences, the reference light emission quantities registered respectively corresponding to each of said reference differences; and said table is looked-up based on said first difference detected by said comparing unit to read corresponding said first light emission quantity." (Emphasis added).

In contrast, Medwick discloses a table holding values for strobe duration and "an associated power value". The power value represents a percentage of the luminance at the specified strobe duration divided by the luminance at a nominal strobe duration. This ratio is not analogous to the plurality of reference differences in the table of the present invention. The

reference differences correspond to possible values detected for the first difference, which is derived by comparing an exposure level detected with flash with an exposure level detected without flash. The first difference is compared with the table's reference differences in order to determine a light emission quantity. A different set of values is used, and therefore a patentably different apparatus for determining an exposure level is claimed. Thus, the table of Medwick, combined with the inventions of Kawahara and Yamamoto, does not render unpatentable the features of claims 7 and 15. Applicant respectfully submits that claims 7 and 15 are in condition for allowance, and requests reconsideration and withdrawal of the rejection.

Claims 19 and 20

Claims 19 and 20 are rejected under § 103(a) as unpatentable over Kawahara in view of Japanese Patent No. JP07-072536 issued to Terunuma Hiroshi (hereinafter "Hiroshi").

The Office Action asserts that Hiroshi discloses "a flash device [which] automatically emitted light regardless of a shutter operation so as to enable the camera to photograph an object where image shadow is reduced." Applicant respectfully disagrees.

The flash devices of Hiroshi enable reduced-shadow close-up photography. With a single on-camera flash, close-up photos may have a shadow due to the space between the lens and the on-camera flash and the associated acute angle of flash light illuminating the object of the photo. Hiroshi provides a slideable second flash and a means for determining whether it should be used or not. In addition, Hiroshi provides a button for initiating only the flashes, in order to determine if the flash-produced shadows are optimally reduced – allowing the user to slide the second flash to a more optimal position, if necessary, before capturing an image. In other words, the flash units do not, as the Office Action asserts, automatically emit light regardless of shutter key operation – a button press is required. In view of this fact, it is not clear how a person skilled in the art could find the present invention obvious in view of Kawahara in combination with Hiroshi. Adding to Kawahara a second flash, and/or a manual means of triggering only the flash would not result in "starting emission of light of said light source

automatically in accordance with an exposure level based on said image information regardless of an operation of said shutter key," as recited by claim 19.

Accordingly, Applicant submits that Kawahara and Hiroshi, alone or in combination, do not disclose every feature of claim 19, nor do they render the features of claim 19 obvious. Claim 20 depends from claim 19, and is therefore believed to be allowable for at least the foregoing reasons. Reconsideration of these claims and withdrawal of the rejection is respectfully requested.

Claims 21 and 22

Claims 21 and 22 are rejected under § 103(a) as unpatentable over Kawahara and Hiroshi in further view of U.S. Patent No. 6,351,606 issued to Yamazaki (hereinafter "Yamazaki").

Claims 21 and 22 depend from claim 19 and are, therefore, believed to be allowable for at least the reasons discussed for claim 19. Yamazaki does not resolve the above-noted deficiencies of the other references.

Claims 9 and 17

Claims 9 and 17 are rejected under § 103(a) as unpatentable over Kawahara, Yamamoto, and Numata in further view of Yamazaki.

Applicant respectfully submits that the features of dependent claims 9 and 17, in addition to being allowable for the same reasons as independent claims 1 and 11 from which they depend, are not disclosed by the cited references.

Claims 9 and 17 recite, in pertinent part, "when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit determines said light emission quantity to be the maximum quantity that can be emitted by said light source."

The Office Action asserts that Yamazaki discloses an exposure control for an electronic camera in which when an exposure level does not match to a preset value, the camera controls a

flash unit to emit light at a maximum amount to obtain best exposure possible for image recording. Applicant respectfully disagrees.

Yamazaki discloses a method to detect obstruction to an electronic flash and to correct an exposure level. In the method, captured image data is processed to determine if the image data is under-exposed. The method further includes determining if the image data was captured during maximum flash output. Depending on these determinations, the user is warned either that their finger obstructed the flash, or that the flash does not reach the subject of the captured image. Alternatively, exposure level of the image data is corrected. However, nowhere does Yamazaki disclose that a "light emission quantity [is set] to be the maximum quantity that can be emitted by said light source," as recited in claims 9 and 17. Accordingly, Applicant respectfully submits that claims 9 and 17 are in condition for allowance for the foregoing reasons as well as by reason of dependency from independent claims 1 and 11, which are believed to be allowable for the reasons discussed above.

For at least the reasons discussed, Applicant believes claims 1, 3, 5-11, 13 and 15-22 are in condition for allowance. Reconsideration of the claims and withdrawal of the rejections is respectfully requested.

Additional Cited References

Since the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone James C. Larsen, Registration No. 58,565, at (703) 205-8000.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

Michael R. Cammarata
Registration No.: 39,491
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant